Landbird Monitoring in Denali National Park and Preserve

Objective

Determine long-term trends in avian abundance.

Design Considerations

- Sampling methodology
- Independence of sampling units
- Observer bias
- Sample size and power to detect trends
- Geographic scale

Strengths of Protocol

- **90% chance of detecting a 50% decline in a 25-year period.**
- **12 species of forest songbirds.**
- **Robust design tailored to Denali.**
- **In line with the LTEM management focus objective.**

Concerns

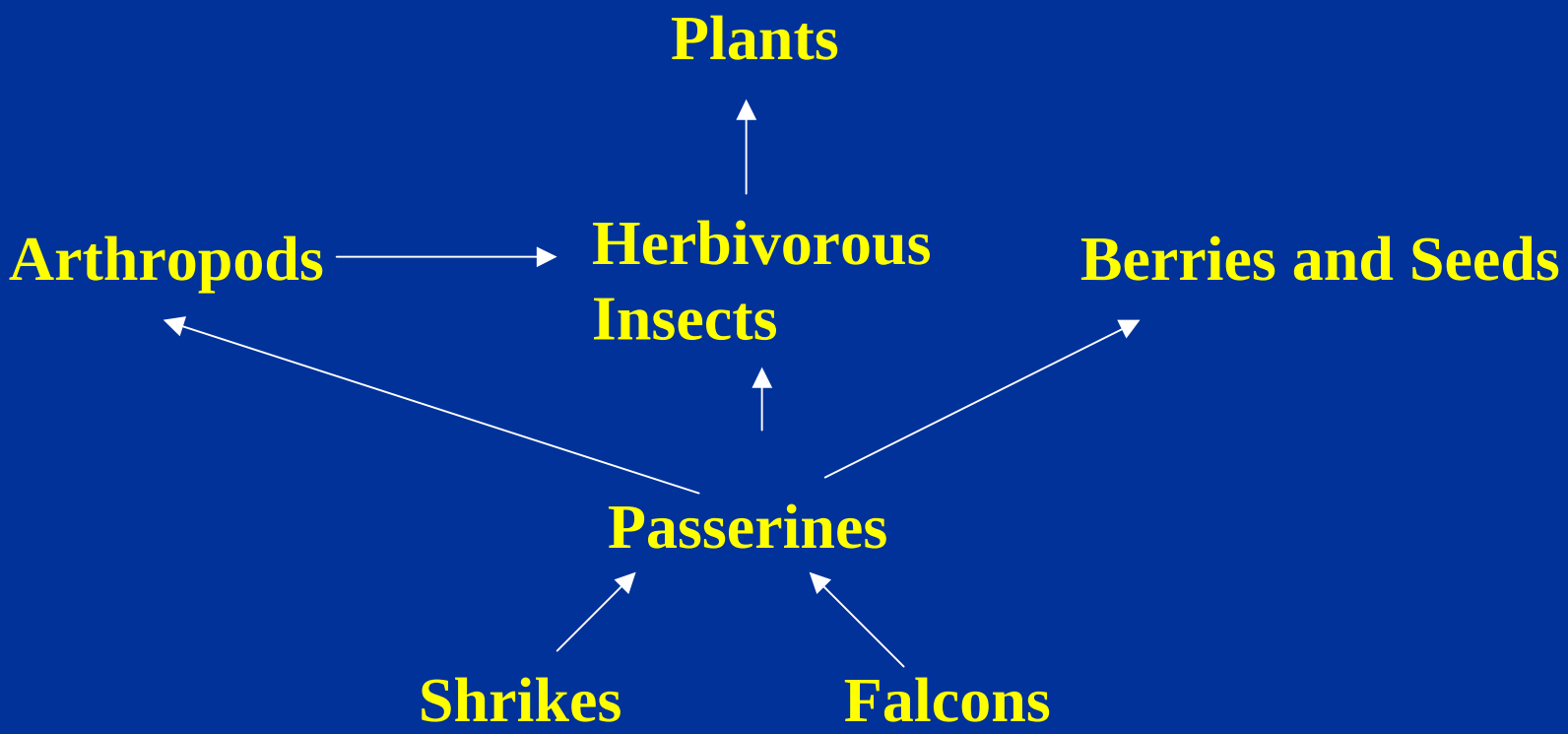
- **Are 12 species enough?**
- **Spatial scale of sampling is not representative of Denali Park.**
- **Debevec/Rexstad analysis.**

Ecological Focus Objective

To improve the understanding of the Denali ecosystem.

Could songbird declines affect ecosystem function in Denali Park?

What role do forest birds play in ecosystem function?



Nesting Success

Predators **Weather** **Insect Abundance**

Plant Biomass

***Test assumptions of abundance estimates**

Recommendations

Management Focus Objective

- Conduct surveys in habitats representative of Denali Park.
- Evaluate whether more species should be monitored.
- Determine whether assumptions of abundance trends are correct.

Recommendations

Ecological Focus Objective

- **Examine factors affecting nest success.**

- **Study the role songbirds play in ecosystem processes in Denali.**